

WHAT IS CLAIMED IS:

1. A ~~headphone type audio signal reproducing apparatus comprising~~  
~~a semiconductor memory for storing digitized and high efficiency compression encoded audio signals,~~  
~~a decoder for reading out data stored in said semiconductor memory and decoding the read-out data, by way of performing an operation which is an inversion of compression encoding,~~  
~~a digital/analog converter for converting output signals from said decoder into analog signals, and~~  
~~a headphone unit for converting output signals from said digital/analog converter into acoustic signals.~~
2. The audio signal reproducing apparatus according to claim 1 wherein the operation of compression encoding comprises dividing input digital signals into a plurality of frequency bands, so that the bandwidths of the bands will become broader for progressively higher frequency bands, setting the allowable noise level on the band-by-band basis in accordance with the energy of each frequency band and quantizing the components of each band with the number of bits corresponding to the level of a difference between the energy of each band and the preset allowable noise level.
3. The audio signal reproducing apparatus according to claim 2 wherein the preset allowable noise level is set so as to be higher for the same energy for progressively higher frequencies.

*Add a*